Math Curriculum: Investigations, CPM, Supports, and Replacement

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Program Support and Diagnostics
Investigations! 3
3 Pillars of Investigations

Routine

Discourse

Games
Investigations 3

Curriculum is designed to engage students in making sense of mathematical ideas. Students have mathematical ideas. Investigations is intended to have them apply what they know to new situations and unfamiliar problems.
The Investigation Classroom for Students

Students work together solving problems with real world application of mathematical concepts rather than doing problems in isolation.

Actively engage in mathematics through reading, writing and oral communication rather than sit and listen.

Communicate mathematical concepts to one another rather than find answers alone.
Listen to one another and question each other rather than answer only to teacher questions.

Use technology for explanation and insight rather than use technology for simple calculations.

Reason through problems to reach solutions rather than memorize procedures.
Math Language Strategies

Using the Math Vocabulary during class time

Pre-teaching math vocabulary

Coaching peers to engage students with disabilities during Math games and workshops-Partner Talk

Model Think Aloud
Differentiation Suggestions for Math Workshop

Adapt the learning Situation

Adapt the Problem

Adapt the Material

Clarify the Problem

Vary the Problem

Scaffold a solution

Extended Thinking

Suggest a Tool
Math Practice Notes

Math Practice Notes are embedded throughout each unit to highlight opportunities to engage students in Math Practices.

Identify what skills, strategies, and practices Activities and Workshops are targeting.
Investigations!
Professional Development 2017-18

All teaching staff attended summer two, full-day workshops

All teaching staff will also attending 4 extended unit planning workshops during PLC time

Teaching staff also attended grade-level PD during staff development day

All educational assistants also attended half-day PD introducing Investigations

Instructional coaches facilitate on-going PD for grade-level teams and participate in classroom-based coaching
College Prep Math (CPM)
CPM envisions a world where mathematics is viewed as intriguing and useful, and is appreciated by all; where powerful mathematical thinking is an essential, universal, and desirable trait; and where people are empowered by mathematical problem-solving and reasoning to solve the world’s problems.

CPM Rationale:

- Strong Common Core alignment
- Coherent and well-sequenced
- Strong conceptual understanding
- Adaptability- can be adapted to meet the needs of all learners
- Quality assessments
- Navigability and usability for teachers
- Parent support
- Professional development component
WSD Teacher Comments-CPM

“CPM makes it comfortable for students to ask questions and problem solve. It provides a vehicle for higher levels of thinking, participation, and communication.”

“CPM embodies a “low floor- high ceiling design” in each lesson, so the text and homework resources address student needs within a range of mathematical abilities.”

“CPM supports student engagement in math that is maintained over time.”
Replacement Curriculum
Attainment: Early Numeracy

Major concepts:

- Counting with one-to-one correspondence
- Identifying symbols =, >, <
- Counting movable and immovable objects
- Recognizing, extending, and creating patterns
- Identifying and naming numerals 1 to 10
- Measuring using a calendar
- Rote counting to 20

- Measuring with nonstandard units
- Creating and adding sets to 10
- Measuring with standard units
- Comparing sets for =, >, and <
Moving with Math Learning System

Math By Topic (piloted Spring & Fall 2017)

C-R-A Instructional Delivery Model (Concrete-Representational-Abstract)


Manipulatives support daily lessons